REMARKS/ARGUMENTS

Claim 41 has been amended to refer to particles consisting of solid polymer. Support for this amendment may be found at page 9, lines 17 to 18 (polymer preferably used in the form of particles) and page 10, lines 3 to 7 (referring to the polymer particles of the present invention).

Claim 41 has been further amended to refer to incorporating into the treatment fluid one or more soluble polymer breakers. Support for "incorporating into the treatment fluid one or more polymer breakers" is provided by former claim 52. Support for the said polymer breaker(s) being soluble is provided by page 13, lines 22 to 28 (additional materials such as polymer breakers may be incorporated into the treatment fluid "by dissolution"), page 12, line 7 (oxidative polymer breakers "may be present in solution") and page 15, lines 3 to 7 (enzyme polymer breakers are "generally … water soluble").

Claims 47 to 49, 52 and 76 have been cancelled.

Claims 53 to 56 and 58 now depend directly on claim 41.

New claim 79 specifies that the one or more soluble polymer breakers are one or more polymer breakers selected from (a) oxidative breakers that are thereby present in solution in the treatment fluid and (b) water soluble enzyme polymer breakers. Support for this claim is provided by page 12, line 7 (oxidative polymer breakers "may be present in solution") and page 15, lines 3 to 7 (enzyme polymer breakers are "generally … water soluble").

Reconsideration of this application is requested. Claims 41 to 46, 50, 51, 53 to 67 and 77 to 79 are under active examination.

Information Disclosure Statement

1. Examiner indicated that no pre-grant publication having the number 2005/034861 exists. As indicated in the attached further IDS, the relevant publication has the number 2005/0034861.

Claim Rejections - 35 USC § 103

2&3. Examiner has rejected claims 41-66 and 76-78 as previously on file as being unpatentable over Todd (US 7,195,068; '068 herein) in view of Todd et al (US 7,080,688; '688 herein).

Examiner referred to the disclosure at column 5, lines 44 to 58 of '068 of polymers that according to '068 are used as "resin materials" as a "coating used to encapsulate" a "delayed-

release oxidizer component". The said resin material then degrades over time in the subterranean formation to release the delayed-release oxidizer, which in turn produces an "acid-consuming component" (see column 4, line 66 to column 5, line 4 of '068 in particular).

Examiner acknowledged that this "resin material" coating described in '068 is not disclosed by '068 to be a "solid polymer" as presently claimed. Examiner therefore referred to '688, which teaches providing particulates coated with an "acid-releasing degradable material", which material may be a "solid material" (column 4, lines 47 to 56 of '688). It has been alleged that it would be obvious to apply the "solid material" of '688 as the "coating used to encapsulate the delayed-release oxidizer component" of '068.

In response, Applicant notes that both '068 and '688 teach multi-component particulates comprising a "coating material" of some form and an "encapsulant material" of some form. Specifically, in '068 polymer resin materials are present as coatings that encapsulate a delayed-release oxidizer component such as ZnO_2, CaO_2 or MgO_2 (see column 4, lines 35 to 40 of '068). In '688 an acid-releasing degradable material is coated onto particulates such as natural sand, quartz sand, particulate garnet, glass, ground walnut hulls, nylon pellets, bauxite, ceramics and polymeric materials (see column 3, lines 25 to 30 of '688).

In contrast, Applicant's invention as claimed involves dispersing in a treatment fluid particles consisting of a solid polymer. The combination of teachings proposed by Examiner in the Office Action would not lead to a process that involves dispersing in a treatment fluid particles consisting of a solid polymer, but rather would necessarily involve the creation of a multi-component particulate comprising, on the other hand, an encapsulant material and, on the other hand, a coating material. Applicant respectfully submits that the presently claimed subject-matter is therefore not obvious from these teachings in the prior art.

Furthermore, the process of the present invention as claimed requires that one or more soluble polymer breakers are incorporated into the treatment fluid (prior to the introduction of the treatment fluid into the underground formation). This feature of the presently claimed invention is not taught in or suggested by '068 or '688.

For the avoidance of doubt, Applicant notes that the exemplified "delayed-release oxidizer components" of '068, namely ZnO_2, CaO_2 and MgO_2, are well known to be insoluble in aqueous solutions such as typical treatment fluids. Therefore these materials are not soluble

polymer breakers present in the treatment fluid as formulated prior to introduction into an underground formation.

Accordingly, the presently claimed process specifies features that are not disclosed in or suggested by '068 and '688. It follows that the teachings of '068 and '688 could not be combined in any way that would lead to the subject-matter claimed in the present invention.

It is therefore submitted that the claimed subject-matter is not obvious from the prior art and it is respectfully requested that the rejections under this heading are withdrawn.

4. Examiner has rejected claim 67 as being unpatentable over '068 in view of '688, and further in view of Constien (US 2002/0142919).

Applicant notes that Constien has been cited with reference specifically to the additional feature of claim 67, i.e. to the use of ammonium bifluoride.

However, as explained above the subject-matter of independent claim 41 is not obvious from '068 in view of '688 since this combination of documents does not teach or suggest the features of dispersing in a treatment fluid particles consisting of a solid polymer and incorporating into the treatment fluid one or more soluble polymer breakers.

Constien also fails to teach or suggest these features of independent claim 41. As Examiner will be aware, Constien relates to coatings applied onto wellbore screens and liners, not to treatment fluids into which particles of solid polymer have been dispersed and into which one or more soluble polymer breakers have been incorporated.

Accordingly, the subject-matter of claim 41, and by necessity, of claim 67, is not taught in or suggested by the combination of '068, '688 and Constien. It is therefore submitted that the rejection under this heading should be withdrawn.

Favorable reconsideration and withdrawal of the outstanding objections and rejections is believed to be in order and is respectfully requested.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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